Bulletin of Anomalous Experience

(Formerly "Ratchet Patrol")

A Networking Newsletter about the UFO "Abduction" Phenomenon and Related Issues for Interested Scientists

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Editor's Corner

This issue departs from the usual format of individual forums of debate to discuss one theme: The role of the electromagnetic spectrum in the understanding of anomalous trauma. You will find no exhaustive proofs here; what you will find are ideas and experimental results from psychology, epidemiology and medicine that all "resonate" -- they are all suggestive of another "dimension" or "field" of energy or influence on human awareness.

I had hoped to include a review of Fred Alan Wolf's book PARALLEL UNIVERSES, but I think I will include that in the next issue. That book, this issue's contents, and Ken Ring's ideas from last issue on an "imaginal realm" are all different aspects of the same basic idea.

I hope you find this thought-provoking, and I invite you to share your thoughts on this issue with your colleagues.

Review: The Electric Connection

The Electric Connection, by Michael Shallis Published by New Amsterdam Books, New York City (1988)

In RP 2 Ken Ring mentioned this book, which deals with the phenomenon of "electrical sensitivity". Ken has observed that many of the UFO experiencers in his work share this characteristic. A study of electrical sensitives might be relevant to our work.

The book has proved difficult to find, for no apparent reason. I finally acquired a copy, and here are my impressions:

The book is most interesting in the first few chapters, where Shallis presents some studies of electrical sensitives. Sheila, for instance,

"all too easily becomes charged with static electricity...she cannot touch a dog, when charged, for fear of hurting him. Two-inch-long sparks flash from her fingers when reaching for a light switch... She boiled the tropical fish when her hand accidentally touched the fish tank thermostat; when ironing one day there was a sudden and massive blue flash which threw her back against the kitchen wall: when she recovered she found the whole base of the iron had blown out. She had already 'destroyed' three other irons as well as three video machines and three tumble dryers...light bulbs 'pop' when she is around and just explode if she tried to replace them...the electric meter speeds up when she is near it..."

"Human batteries" like Sheila do not particularly enjoy this experience. Replacing all those appliances is expensive, for instance. It can lead to awkward social situations (on a bad day Sheila plugs herself into the ground pin of an electric socket). On a more serious note, these people tend to have multiple allergies to food and inhalants. Shallis also observes that they tend to be psychically sensitive, and often practice "psychic healing."

These case studies are quite compelling, but there is little in the way of objective measurement or scientific investigation to strengthen these anecdotes. He makes reference to a "survey" of electrical sensitives he conducted, but we do not learn anything more about that beyond these extraordinary cases.

After an overview of the history of electricity and magnetism, Shallis goes on to a cursory and surprisingly accepting view of a wide range of unorthodox medical practices. At this point whatever scholarship Shallis was displaying becomes hopelessly lost. He describes pyramid power, homeopathy, radiesthesia, radionics and orgone therapy, for instance, as being "verified," "scientifically documented," and the dreaded "can be explained by ordinary scientific principles."

Shallis gives a nod to UFOs, subscribing to Devereux's theory (EARTHLIGHTS) that UFOs are luminous electrical discharges found along fault lines. "Of course, some could be alien spacecraft," he reminds us. Well, at least he covers all the bases.

He goes on to expound on technology, particularly computers, as insidious agents of evil that literally drain our wills. Apparently by harnessing electricity in its various forms, we are creating evil entities, modern day incarnations of Ahriman (Zoroastrian god of darkness). The last chapters of the book reminded me of a Reefer Madness parody applied to computers:

"Dr. John Morris, a lecturer in Literature at Brunel University, a technological university at the forefront of computer technology, has written about the growing evidence of the connection between the new technology and references to the diabolic...a reference to the devil or to demons occurs wherever computers are to be found."

"Ahriman brings coldness, and his physical effect on people is already felt. Coldness of the chest is part of the programmers' physical symptoms. Other Ahrimanic symptoms include nausea, headache and disorientation. They are found in people who live near pylons and overhead power lines. People are made ill by him and the electrical disorders that we have investigated are typical Ahrimanic symptoms..."

"Alan Turing, the father of artificial intelligence, committed suicide at the age of forty-two. He died by biting into an apple laced with cyanide. His form of death symbolises the fall of man, the eating of the forbidden fruit."

I found reading this book to be a profoundly disappointing experience. It's difficult to put much credence in the anecdotes he relates in the first few chapters, because of the extremism he shows in the rest of the book. While it may be entertaining, the book is of very limited value as a source of information on "electrical

EM Fields Affect Consciousness

After reading THE ELECTRIC CONNECTION I decided to hunt down the book ELECTROMAGNETISM AND LIFE, by Becker and Marino, that Shallis is so fond of referring to. The University of Toronto Library, to my surprise, had two copies. It is a technical and scholarly work demonstrating the electrical and magnetic properties of human tissue and organs. It does not deal with the bizarre effects discussed in THE ELECTRIC CONNECTION.

The library had over a dozen works devoted to the biological effects of electromagnetic fields. Few discuss the effect on consciousness and higher mental functions. But, buried in a collection of papers from a Food and Drug Administration - Bureau of Radiological Health conference, is a fascinating document. It provides experimental evidence that changes in the electromagnetic environment can change states of consciousness, in susceptible individuals.

So what? It suggests a "final common pathway" between disparate observations associated with UFO encounters, and abductions in particular. It may explain how states of consciousness (and maybe more) in abductees are altered; since some people seem to be more sensitive to these effects than others, it may explain why different people in the same abduction situation can react differently (some are "turned off" while others experience the abduction); and, perhaps most important, it could provide a characteristic of people and places that can be objectively measured and compared, and perhaps even reproduced.

I present excerpts from this paper for your consideration.

Critical Aspects of Human Versus Terrestrial Electromagnetic Symbiosis
E. Stanton Maxey, M.D.
from
Biological Effects of Electromagnetic Waves
Selected Papers of the USNC/URSI Annual Meeting
U.S. National Committee of International Union of Radio Science
Boulder, Colorado October 20-23 1975

Abstract

Biological systems are influenced by the terrestrial electrical environment. This environment includes electric fields, magnetic fields, field modulations and aerion (positive and negative) concentrations. Nature ordains harmonious variations of these factors. The human organism exhibits revealing electrical characteristics. Electromagnetic brain waves occur at frequencies parallelling those of terrestrial sferics and the Schumann resonance. Decision making abilities are subordinate to alpha, beta, theta and delta rhythms with their related states of consciousness.

The present study confirms the brain's synchronous electrical response to artificially generated weak magnetic waves in some subjects. Such waves freely penetrate metallic structures.

Some aircraft and motor vehicle accidents may be secondary to operators' brains having become entrained to the magnetic waves generated in storm systems. Critical working spaces, e.g. aircraft cockpits, should be engineered to prevent bioentrainment.

(From body of the paper)

Many studies reveal the electrical characteristics of biological organisms and their cyclical periodicities paralleling those in the environment. Human electric fields show this characteristic clearly. Extra low frequency fields have been shown to influence EEG power spectra. The direct linkage mechanisms, if any, remain unrecognized but it is known that brain electrical frequencies of from 0.1 - 30 Hx parallel those observed in the terrestrial environment where they are variously known as the Schumann resonance or sferics.

H. Konig, Elektrophysikalisches Institut, West Germany, reported on prolonged reaction times which he associated with the coexistence of environmental slow waves. It is known that road accidents increase in frequency under those electrical conditions which accompany storm systems, fog and rain. H. Ludwig has shown that magnetic waves penetrate ferrous and even Mu metal structures [like automobiles and aircraft fuselages] with great efficiency.

U.S. Army Intelligence recently translated "The Geomagnetic Field and Life" by the Russian A.P. Dubrov. This book details experimental results obtained by V.N. Mikhailovsky which revealed changes in the electroencephalogram (EEG) upon application of 0.01 - 5 Hz, 1000

gamma sine waves. The EEG showed theta (4 - 7 Hz) and even delta (0.1 - 4 Hz) rhythms. These rhythms are associated with reverie and dreaming. Subjects functioning in theta rhythms (with EEG confirmation) described their states of consciousness variously as "fuzzy, vacillating, puzzled, unreal." Such states are hardly what one would wish in flying pilots or drivers on superhighways.

Since these low frequency magnetic waves accompany certain weather systems and since they penetrate metallic structures they become prime suspects for the carrying of psychologically depressing influences to the brains of vehicle operators. If true, this would be a critical aspect indeed. We decided to replicate the Mikhailovsky experiment...

(the next section of the paper describes the technical details of the experimental apparatus and provides EEG tracings of the subjects)

Discussion

The observed results support Mikhailovsky's contention that magnetic waves of very low frequency and intensity significantly influence brain electrical activity in sensitive persons.

To the degree that brain electrical activity indicates subjects' "states of consciousness" it is reasonable to believe that extra low frequency magnetic waves do influence mental activity in sensitive persons. The term "bioentrainment" describes this phenomenon. It is logical to suspect that "pilot error" weather-related landing catastrophes may follow pilots' bioentrainment to the low frequency magnetic component of terrestrial storm systems. Many road vehicle accidnets might be similarly explained.

Conclusions

1. Mikhailvosky's observation that ELF weak magnetic waves can influence the brain's electrical activity has been confirmed.

2. ELF weak magnetic waves can, like photic stimulation, control the brain's electrical rhythms in sensitive human subjects.

3. Brain versus magnetic wave synchronicity is apparently an "all or none" phenomenon which may be described in terms of frequency driving but not in terms of power coupling.

4. Whether or not vehicular accidents are caused by brain entrainment to terrestrial magnetic phenomnena is clearly a question amenable to multidisciplinary research.

Biological Effects of EM Fields: A Review

Maxey's paper encouraged me to review what is known about the biological effects of electromagnetic (EM) fields. Until as recently as ten years ago, it was widely believed that the only effect of electromagnetic waves on biological systems was the "thermal effect" -- the same principle that makes the microwave oven such a handy kitchen appliance. Given enough energy, the waves will heat the tissue. Weaker magnetic fields, like the earth's ambient field, were thought to have no biological effects.

It appears this is not true; weak magnetic fields can have effects on cells, organ systems, the nervous system, and consciousness and experience. We do not understand HOW it does so; some theories will be presented later in this section.

I present this data in three segments: First, epidemiological evidence; second, laboratory evidence of effects on biological tissues and organ systems; third, effects (epidemiological and laboratory) on consciousness.

Some of this data comes from a three-part series by Paul Brodeur that appeared in THE NEW YORKER in June 1989.

Epidemiological Evidence

In the 1970's, epidemiologist Nancy Wertheimer determined that children who had lived in homes near high-current electrical wires had died of cancer at twice the rate seen in children living in homes near low-current wiring. The current through these wires produces a magnetic field hundreds of times weaker than the ambient magnetic field, but unlike the earth's magnetic field, this is an alternating current magnetic field (because of the alternating current running through the wires).

Further epidemiological research demonstrated that workers who were frequently exposed to alternating-current magnetic fields -- among those workers were power-station operators, telephone linemen, power linemen, subway and elevated railway motormen, electricians and welders -- had developed cancer at a significantly higher rate than the population as a whole.

Biological effects of EM

- Using simulated 60 Hz hi-voltage power line fields, a significant suppression of the killing capacity of T-lymphocyte cells was demonstrated
  W. Ross Adey and Daniel B. Lyle, 1981, U of California
- The iron in the hemoglobin becomes magnetized around computer terminals,causing red blood cells to displaying the "chaining" known as the Rouleau effect. If a blood sample that displays this effect is then placed in the sunlight, it will un-

chain itself, as long as the exposure is done in such a way as to allow ultraviolet light to interact with the blood.

John Ott

- The enzyme alpha-amylase was found to be deactivated by extremely low intensity RF fields in the range of about 10 MHz. The deactivation occurred at very sharply defined frequencies with a regular spacing. Similar effects on gamma globulin in the region of 200 MHz were also observed.

(U.S. Army Medical Research study, 1960's -- personal communication)

- German bacteriologist H. Bortels discovered circa 1950 that the freezing point of water varied from day to day when the container was unshielded from radiation.

Bortels, H. (1951) Beziehungen zwischen Witterungsablauf, physikalisch- chemischen Reaktionen, biologischem Geschehen und Sonnenaktivitat. Naturwissenschaften, 38, 165-176.

- In Japan, haematologist Maki Takata found that blood levels of albumen, which is involved in the clotting process, was positively correlated with exposure to solar radiation.

Takata, M. (1951) Uber eine neue biologisch wirksome Komponente dersonnenstrahlung. Archiv. Met. Geophys. Bioklimat, 2, 482-507.

- A French study showed cases of lymphocytosis (an excess of one type of white blood cell) correlated with sunspot activity.

Schultz, N. (1960) Les globules blancs des sujets bien portants et les taches solaires. Toulouse Medical, 10, 741-757.

Effects on Brain and CNS

"The brain and central nervous system are 'natural candidates for interaction with fields' because they themselves utilize low frequency fields for cellular communication and functioning.

"It is now clear that 60Hz and other low frequency electromagnetic fields can interact with individual cells and organs to produce biological changes. The nature of these interactions for public health remains unclear, but there are legitimate reasons for concern."

by Indira Nair, M. Granger Morgan and H. Keith Florig, Dept. of Engineering and Public Policy, Carnegie-Mellon University. Quoted text is from an Oakland Trib, Associated Press article bylined Barton Reppert.

In 1963, Dr. Robert O. Becker and Howard Friedman, a psychologist at the V.A. Hospital in Syracuse, showed that there was a relationship between the dates of admission of patients to the psychiatric services of hospitals and the occurrence of solar magnetic storms.

Also in 1963, Becker and Friedman exposed human volunteers to pulsed magnetic fields of similar frequency and considerably greater strength than those associated with magnetic storms, and found that doing so significantly slowed the volunteers' ability to react to the appearance of a light by pressing and releasing a telegraph key.

A year earlier, however, a Soviet investigator named Yuri Alexandrei Khodolov had reported that exposure to even stronger magnetic fields caused areas of cell death in the brains of rabbits, and when Becker and Friedman learned of this they discontinued their experiments with human beings and advised other researchers to do the same. Then, in replicating Khodolov's experiment, they discovered that a magnetic field produced stress in rabbits which activated a preexisting but quiescent brain disease, and that this disease produced the lesions Khodolov had observed. (Brodeur)

By the end of 1975 W. Ross Adey and his coworkers had gathered considerable evidence to show that weak EM fields have a direct effect on the vertebrate nervous system. Their monkey studies had produced behavioral effects indicating that weak oscillating fields could result in modification of recall and of the ability to estimate time. Their experiments with chick-brain tissue and live cats indicated that weak fields could alter the flow of calcium from the membranous surfaces of cells and from their protruding glycoprotein strands, thus changing the chemistry of the brain. These findings led them to conclude that slow electrical oscillations within the forest of protein strands surrounding brain cells formed the basis of an independent cell-to-cell communication system, and to speculate that such oscillations might be the basis for changes in brain chemistry associated with the storage of information. (Brodeur)

Mechanism of the EM Effect

The theories proposed for how extremely-low frequency (ELF) fields cause the biological effects discussed above have do with cyclotron resonances of various ions which travel across cell membranes; if the frequency of the ELF field matches the resonant frequency of some particular ion, it's supposed to encourage the transport of that particular ion across the cell membrane, which is not necessarily a good thing.

Reproducibility and the Local Geomagnetic Field

The field strengths we are talking about here are comparable to, or lower, than the ambient geomagnetic field. This has led to a problem in reproducing some of the experimental results discussed above, as the ambient field in two laboratories conducting the same experiment may differ. For instance, Blackman has demonstrated that the frequency of EM fields that could induce changes in calcium-ion outflow from brain cells was not constant, but was proportional to the strength of the local geomagnetic field. (Brodeur)

Conceptualization

One intriguing aspect of the premise that there is an association between UFO events, and/or "abductions" and electromagnetic fields, is that it provides an explanation for observations made by investigators with quite different ideas about the true nature of the phenomenon. For instance, the variable sensitivity of individuals to similar EM fields, as demonstrated in the Maxey paper, could explain why some witnesses to an abduction event appear to be "turned off" while others have a vivid abduction experience. Similarly, it puts Deveraux's premise that UFO sightings tend to occur along lines of geomagnetic instability in a new "light." Admittedly this is all pretty tenuous so far; maybe we'll finally start an argument here!

To conclude, here is an (until now) unpublished research proposal which neatly ties together the preceding ideas into...

A Field Theory Conceptualization For The Treatment Of Panic, Anxiety Disorders, Phobias And Anomalous Trauma

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(unpublished)

A field theory conceptualization of treatment is an expansive rather than a narrow modality for treatment -- one that encompasses and expands upon existing models of treatment, and embraces all dimension of the human system: behavioral, cognitive, emotional, physiological and spiritual.

All life forms exist within known and unknown fields. These fields (gravitational, electromagnetic and quantum matter fields) are primary as they give rise to and sustain all life forms. Using very specific moment-to-moment interventions has led me to observe a most remarkable phenomenon. This phenomenon not only has major implications for the treatment of anxiety disorders, but also for understanding the disease process itself. Through observing changing states of consciousness it became evident how consciousness interacts with matter through altering specific states of perception and memory.

The electromagnetic field that surrounds all life forms, expands and contracts instantly in relation to very specific internal and external events. These fields of energy can be measured, touched, felt, and seen -- even by the untrained eye. These fields of influence are interpenetrating and interconnecting, and there are fields within fields from the galactic to the subatomic level. Through the ever-changing expansion and contraction of these fields life is sustained or terminated. The more expanded the field, the greater the overall health of the individual. Conversely, in a state of panic or disease the field is always contracted.

What I also propose is that these fields that expand and contract in relation to changes in perception, memory, behavior, nutrition, etc. are an interpenetrating system; and that this is the immune system. Panic, fear, anger and other negative emotions contract the field to such a degree that ultimately "potential energy" is converted to symptoms at a psychological or physiological level, or both.

It is the extended mind maximized that HEALS... it is learning to apply specific techniques to extend the field as we extend the mind, breath, and the body through a combining of all the senses. It is returning to a state of BALANCE in our lives... a state that is natural... Once again, we are much more than our physical selves. Energy at birth preceded us into existence, and those laws of nature have not changed.

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